ABSTRACT

A method and apparatus for electrolytic plating of selected areas of printed circuit board traces is disclosed. The method is characterized by its elimination of the need for plating bus bars and plating contacts on the printed circuit board to facilitate a spot-plating process. In one embodiment, a printed circuit board substrate is provided which is at least partially conductive, such that a plating voltage may be applied to any one or more points on the substrate during a spot plating operation. In another embodiment, the substrate material is initially partially conductive, but following the spot-plating operation, is subjected to a curing treatment or the like to cause degeneration of the substrate's conductivity. Carbon-impregnated polimid, partially-cured polyimid, FR4 or FR5, with appropriate contaminants introduced therein are contemplated as materials suitable for a printed circuit board substrate in accordance with the invention. In another embodiment, the traces are first applied to the partially conductive substrate by an electroplating operation wherein an electroplating voltage is applied to the substrate such that the substrate itself serves as one terminal of the electroplating system.